



RESEARCH BRIEF

Research Services

Vol. 1504
February 2016

Christie Blazer, Supervisor

Miami-Dade County Public Schools: 2014-2015 Student Performance in the International Baccalaureate Program

Results at a Glance

This Research Brief summarizes the performance of Miami-Dade County Public Schools (M-DCPS) students participating in the International Baccalaureate (IB) program. The IB program was offered at six M-DCPS high schools in 2014-2015. The number of IB examinations taken in M-DCPS remained relatively stable from 2013-2014 to 2014-2015, decreasing by less than one percentage point. Almost two-thirds of IB examinations in M-DCPS were taken by Hispanic students, and females took 61% of the examinations. The percent of IB examinations receiving passing scores remained stable at 80% from 2013-2014 to 2014-2015. White and Hispanic students had higher passing rates on IB examinations than Black students. The passing rates for males and females were similar. At the conclusion of the 2014-2015 school year, 75% of eligible M-DCPS students received IB diplomas.

The International Baccalaureate (IB) program is a rigorous pre-university curriculum and examination program that emphasizes the development of students' intellectual, personal, emotional, and social skills. The IB program provides students with a broad general education, while offering specialization based on students' interests and plans. The IB program is recognized at colleges and universities throughout the United States and worldwide.

Three IB programs span the years from kindergarten to pre-university. The programs can be offered individually (the Primary Years Program for students aged 3-12, the Middle Years Program for students aged 11-16, and the IB Diploma Program for students aged 16-19) or as a continuum. This report focuses on the IB Diploma Program that is offered at M-DCPS senior high schools.

The IB Diploma Program is a two-year liberal arts curriculum designed to promote understanding of global citizenship. The program encourages students to become critical and compassionate thinkers and informed participants in local and world affairs. Students study six courses from six subject groups: language and literature; language acquisition; individuals and societies; sciences; mathematics; and the arts. Three additional core requirements are designed to broaden students' educational experience: the extended essay, which requires students to engage in independent research relating to one of the subjects they are studying; a Theory of Knowledge course that encourages students to reflect on the nature of learning and different

kinds of knowledge; and a Creativity, Action, Service (CAS) component that requires students to complete 150 hours of a combination of arts, athletics, and community service projects.

Students in the IB Diploma Program take written examinations in each subject. These examinations assess the extent to which students have mastered advanced academic skills such as analyzing and presenting information; evaluating and constructing arguments; and solving problems creatively. Basic skills are also assessed, including retaining knowledge, understanding key concepts, and applying standard methods. Examinations are scored on a scale of 1 to 7 for each subject. A score of 4 is considered to be a passing score on an IB examination. Students must earn a total of 24 points on their six IB examinations in order to receive the IB diploma, subject to certain minimum levels of performance across all components of the program and satisfactory completion of the CAS requirement. Students can also be awarded up to three additional points for their combined results on Theory of Knowledge and the extended essay.

For examinations taken in foreign languages, IB course descriptions are as follows:

- Language A: Literature – The course introduces students to the analysis of literary texts. The course is available in 55 languages.
- Language A: Language and Literature – The course introduces the critical study and interpretation of written and spoken texts from a wide range of literary and non-literary genres. The course is available in 17 languages.
- Classical Languages (Latin or Classical Greek) – The course provides opportunities for students to study the language, literature, and culture of ancient Rome or Greece.
- Language B – The course is intended for students who have some previous experience of learning the language.
- Language Ab Initio – The course is for beginners (students who have little or no previous experience of learning the language they have chosen).

Six M-DCPS high schools offered the IB program and administered the corresponding IB examinations during the 2014-2015 school year: Coral Gables Senior, Coral Reef Senior, John A. Ferguson Senior, Miami Beach Senior, North Miami Senior, and South Dade Senior. This Research Brief includes data on these six M-DCPS schools. Tables included in this report provide data on the number of IB examinations taken and the percentage of examinations receiving passing scores, by subject area for all six M-DCPS schools combined and by gender and ethnicity separately for each of the six IB schools. The number and percentage of participating students earning diplomas at each IB school are also provided. Finally, appendices at the conclusion of the report provide the number of IB examinations taken and the percentage of examinations receiving passing scores separately for each of the six M-DCPS IB high schools. The reader should note that results are not reported if fewer than 10 examinations were taken.

Participation in Examinations

- In 2014-2015, M-DCPS students took 3,288 IB examinations. The number of examinations taken by M-DCPS students remained relatively stable from 2013-2014 to 2014-2015, decreasing by 0.7%.
- M-DCPS students took IB examinations in 28 subject areas in 2014-2015. Overall, the most IB examinations were taken in Biology, English Literature, History, Mathematical Studies, and Spanish B in 2014-2015. Almost two-thirds (64%) of IB examinations taken by M-DCPS students were taken in these five subject areas.
- The district's Hispanic students took 65% of all IB examinations in 2014-2015. White students took 17% of IB examinations, Black students took 9%, and students classified as "Other" (American Indian, Asian, and Multiracial categories) took 10%.
- Sixty-one percent of IB examinations in M-DCPS were taken by females and 39% were taken by males in 2014-2015.
- Of all IB examinations taken during the 2014-2015 school year, the largest number was taken by students at Coral Reef Senior. They participated in 28% of all IB examinations. The percentages of examinations taken at the other five M-DCPS IB schools were as follows:
 - Coral Gables Senior: 25%
 - John A. Ferguson Senior: 22%
 - Miami Beach Senior: 11%
 - South Dade Senior: 8%
 - North Miami Senior: 6%
- From 2013-2014 to 2014-2015, the largest increase in the number of IB examinations administered was seen at Miami Beach Senior (37% increase). The number of IB examinations administered also increased at John A. Ferguson Senior (8%) and Coral Gables Senior (4%). The number of IB examinations taken decreased at South Dade Senior (36%), North Miami Senior (9%), and Coral Reef Senior (4%).
- In 2014-2015, IB examinations were taken in more content areas at Coral Gables Senior (17) and John A. Ferguson Senior (16) than at the other M-DCPS IB schools.

Examination Results

- Overall, the percentage of IB examinations receiving passing scores in M-DCPS remained stable at 80% from 2013-2014 to 2014-2015.
- The 2014-2015 subject areas in which the highest percentages of M-DCPS IB examinations received passing scores were Dance, Spanish A Language and Literature,

and Sports Exercise. The subject areas in which the lowest percentages of IB examinations received passing scores were Design Technology and Visual Arts.

- In 2014-2015, 81% of M-DCPS Hispanic and White students, 73% of Black students, and 76% of students classified as "Other" received passing scores on IB examinations
- A similar percentage of the district's males and females passed IB examinations (79% and 80%, respectively) in 2014-2015.
- During the 2014-2015 school year, Coral Reef Senior had the highest percentage of IB examinations receiving passing scores (94%), followed by Coral Gables Senior (81%), North Miami Senior (78%), John A. Ferguson Senior (76%), Miami Beach Senior (75%), and South Dade Senior (42%).
- From 2013-2014 to 2014-2015, the percentage of IB examinations receiving passing scores increased at three of the six IB schools: Coral Gables Senior, Coral Reef Senior, and North Miami Senior. The percentage of IB examinations receiving passing scores decreased at John A. Ferguson Senior, Miami Beach Senior, and South Dade Senior.

Diploma Results

- Grade 12 students who were enrolled in the IB program, met all program requirements, and took the required examinations were eligible to receive IB diplomas. The number of M-DCPS students eligible to receive IB diplomas decreased by one percentage point from 2013-2014 to 2014-2015.
- A total of 419 M-DCPS students, or 75% of eligible students, received IB diplomas at the conclusion of the 2014-2015 school year. The percentage of the district's eligible IB program students receiving an IB diploma decreased by two percentage points from 2013-2014 to 2014-2015.
- Of the six M-DCPS IB high schools, Coral Reef Senior had the highest percentage of eligible students receiving IB diplomas (96%).
- Four of the six M-DCPS IB high schools posted increases in the percentages of eligible students receiving diplomas from 2013-2014 to 2014-2015: Coral Reef Senior, John A. Ferguson Senior, Miami Beach Senior, and North Miami Senior. The percentages of eligible students receiving IB diplomas decreased at Coral Gables Senior and South Dade Senior.

**Table 1. Number of IB Examinations Taken and Percent of IB Exams
Passed by Subject Area, 2013-2014 and 2014-2015
M-DCPS, All IB Schools Combined**

Subject Area	# of Exams Taken		% of Exams Passed	
	2013-2014	2014-2015	2013-2014	2014-2015
Biology	287	302	64%	59%
Business and Management	16	13	81%	62%
Chemistry	196	218	54%	61%
Chinese B	3	N/A	N/A	N/A
Computer Science	1	8	N/A	N/A
Dance	8	12	N/A	1%
Design Technology	20	20	25%	35%
Economics	18	7	39%	N/A
English A Literature	560	550	97%	96%
Film	34	31	97%	94%
French B	106	100	77%	81%
Geography	N/A	27	N/A	63%
German B	23	16	100%	81%
History	569	546	76%	79%
Information Technology in a Global Society	26	29	96%	93%
Italian B	15	25	87%	84%
Mathematical Studies	380	334	81%	81%
Mathematics	177	199	75%	67%
Music	9	6	N/A	N/A
Physics	46	25	30%	64%
Portuguese	2	5	N/A	N/A
Psychology	271	265	74%	74%
Social & Cultural Anthropology	71	N/A	100%	N/A
Spanish A Language & Literature	15	24	93%	100%
Spanish AB	18	17	72%	82%
Spanish B	365	385	98%	96%
Sports Exercise	N/A	33	N/A	100%
Theatre	28	49	82%	98%
Visual Arts	46	30	76%	43%
World Religions	N/A	12	N/A	92%
Total, All Subjects	3310	3288	80%	80%

**Table 2A. Number of IB Exams Taken and Percent of IB Exams Passed,
by Ethnicity, 2014-2015**

<u>School</u>	White		Black		Hispanic		Other		Total	
	# of Exams Taken	% of Exams Passed	# of Exams Taken	% of Exams Passed	# of Exams Taken	% of Exams Passed	# of Exams Taken	% of Exams Passed	# of Exams Taken	% of Exams Passed
Coral Gables Senior	150	79%	26	85%	614	82%	40	75%	830	81%
Coral Reef Senior	172	92%	84	93%	556	96%	103	93%	917	94%
John A. Ferguson Senior	30	77%	27	63%	601	76%	64	80%	722	76%
Miami Beach Senior	187	74%	N/A	N/A	156	76%	18	89%	361	75%
North Miami Senior	5	60%	112	71%	66	91%	25	80%	208	78%
South Dade Senior	N/A	N/A	47	40%	138	45%	65	38%	250	42%
Total, All IB Schools	544	81%	296	73%	2131	81%	315	76%	3288	80%

**Table 2B. Number of IB Exams Taken and Percent of IB Exams Passed,
by Gender, 2014-2015**

<u>School</u>	Female		Male		Total	
	# of Exams Taken	% of Exams Passed	# of Exams Taken	% of Exams Passed	# of Exams Taken	% of Exams Passed
Coral Gables Senior	494	81%	336	80%	830	81%
Coral Reef Senior	540	93%	377	97%	917	94%
John A. Ferguson Senior	486	80%	236	69%	722	76%
Miami Beach Senior	247	76%	114	75%	361	75%
North Miami Senior	113	75%	95	81%	208	78%
South Dade Senior	142	45%	108	39%	250	42%
Total, All IB Schools	2022	80%	1266	79%	3288	80%

**Table 3. Number and Percent of Students Receiving IB Diplomas,
by School and M-DCPS Overall,
2013-2014 and 2014-2015**

School	Number of Students Eligible for IB Diplomas		Number of Students Receiving IB Diplomas		Percent of Students Receiving IB Diplomas	
	2013- 2014	2014- 2015	2013- 2014	2014- 2015	2013- 2014	2014- 2015
Coral Gables Senior	125	136	103	106	82%	78%
Coral Reef Senior	159	153	146	147	92%	96%
John A. Ferguson Senior	128	125	82	91	64%	73%
Miami Beach Senior	44	60	27	43	61%	72%
North Miami Senior	40	38	23	24	58%	63%
South Dade Senior	67	43	32	8	48%	19%
Total, All IB Schools	563	555	413	419	73%	75%

Summary

This Research Brief summarized the performance of M-DCPS students participating in the IB program. Six M-DCPS high schools offered the IB program and administered the corresponding IB examinations during the 2014-2015 school year: Coral Gables Senior, Coral Reef Senior, John A. Ferguson Senior, Miami Beach Senior, North Miami Senior, and South Dade Senior.

Participation in the IB program in M-DCPS remained relatively stable, with the number of IB examinations taken decreasing by less than one percentage point from 2013-2014 to 2014-2015. Over 3,200 examinations were taken by M-DCPS students in 28 subject areas in 2014-2015. Almost two-thirds of IB examinations were taken by Hispanic students, and females took 61% of the examinations.

Passing rates on IB examinations ranged from 42% to 94% at each of the schools, with an overall passing rate of 80% across the six schools. Coral Reef Senior had the highest percentage of IB examinations receiving passing scores. White and Hispanic students had higher passing rates on IB examinations than Black students or students classified as Other. The passing rates for males and females were similar.

Overall, 75% of M-DCPS' eligible students received an IB diploma at the conclusion of the 2014-2015 school year. The percentage of eligible students earning an IB diploma decreased by two percentage points from 2013-2014 to 2014-2015. Of the six M-DCPS IB high schools, Coral Reef Senior had the highest percentage of eligible students receiving IB diplomas.

**Appendix A. Number of IB Examinations Taken and Percent of IB Exams
Passed by Subject Area, 2013-2014 and 2014-2015
Coral Gables Senior**

Subject Area	# of Exams Taken		% of Exams Passed	
	2013- 2014	2014- 2015	2013- 2014	2014- 2015
Biology	65	69	65%	65%
Business and Management	7	6	N/A	N/A
Chemistry	57	53	25%	47%
Chinese B	3	N/A	N/A	N/A
Computer Science	1	8	N/A	N/A
English A Literature	125	136	99%	97%
French B	23	29	74%	72%
German B	9	7	N/A	N/A
History	137	131	77%	89%
Italian B	5	12	N/A	92%
Mathematical Studies	90	96	91%	97%
Mathematics	31	42	61%	43%
Music	N/A	1	N/A	N/A
Physics	44	24	27%	63%
Psychology	105	103	73%	70%
Spanish A Language & Literature	15	24	93%	100%
Spanish B	72	76	99%	97%
Theatre	7	12	N/A	100%
Visual Arts	2	1	N/A	N/A
Total, All Subjects	798	830	76%	81%

Appendix B. Number of IB Examinations Taken and Percent of IB Exams Passed by Subject
Area, 2013-2014 and 2014-2015
Coral Reef Senior

Subject Area	# of Exams Taken		% of Exams Passed	
	2013-2014	2014-2015	2013-2014	2014-2015
Biology	78	47	83%	83%
Chemistry	97	94	84%	74%
English A Literature	159	151	98%	100%
French B	40	29	93%	97%
German B	14	9	100%	N/A
History	159	151	96%	95%
Information Technology in a Global Society	26	29	96%	93%
Mathematical Studies	113	75	89%	99%
Mathematics	49	90	94%	93%
Psychology	32	51	100%	100%
Social & Cultural Anthropology	71	0	100%	N/A
Spanish B	99	121	100%	100%
Sports Exercise	N/A	33	N/A	100%
Theatre	21	37	81%	97%
Total, All Subjects	958	917	93%	94%

Appendix C. Number of IB Examinations Taken and Percent of IB Exams Passed
by Subject Area, 2013-2014 and 2014-2015
John A. Ferguson Senior

Subject Area	# of Exams Taken		% of Exams Passed	
	2013-2014	2014-2015	2013-2014	2014-2015
Biology	21	84	43%	63%
Business and Management	9	7	N/A	N/A
Chemistry	10	45	50%	64%
Dance	8	12	N/A	N/A
Design Technology	20	20	25%	35%
English A Literature	127	124	97%	94%
Film	34	31	97%	94%
French B	21	19	62%	68%
History	127	123	59%	72%
Italian B	10	13	80%	77%
Mathematical Studies	63	49	78%	73%
Mathematics	74	45	65%	36%
Physics	2	1	N/A	N/A
Psychology	22	22	91%	100%
Spanish B	87	93	97%	98%
Visual Arts	34	22	68%	50%
World Religions	N/A	12	N/A	92%
Total, All Subjects	669	722	77%	76%

Appendix D. Number of IB Examinations Taken and Percent of IB Exams
Passed by Subject Area, 2013-2014 and 2014-2015
Miami Beach Senior

Subject Area	# of Exams Taken		% of Exams Passed	
	2013-2014	2014-2015	2013-2014	2014-2015
Biology	22	35	55%	26%
Chemistry	23	26	22%	35%
English A Literature	44	60	100%	98%
French B	2	7	N/A	N/A
Geography	N/A	27	N/A	63%
History	43	61	88%	77%
Mathematical Studies	29	38	93%	92%
Mathematics	15	22	93%	73%
Music	9	5	N/A	N/A
Portuguese B	2	5	N/A	N/A
Psychology	33	27	79%	85%
Spanish AB	12	13	58%	92%
Spanish B	29	35	100%	100%
Total, All Subjects	263	361	80%	75%

Appendix E. Number of IB Examinations Taken and Percent of IB
Exams Passed by Subject Area,
2013-2014 and 2014-2015
North Miami Senior

Subject Area	# of Exams Taken		% of Exams Passed	
	2013-2014	2014-2015	2013-2014	2014-2015
Biology	43	29	72%	86%
Economics	18	7	39%	N/A
English A Literature	38	37	100%	97%
French B	11	14	82%	93%
History	38	37	63%	68%
Mathematical Studies	30	34	80%	79%
Mathematics	2	0	N/A	N/A
Psychology	22	27	77%	63%
Spanish B	27	23	93%	78%
Total, All Subjects	229	208	77%	78%

**Appendix F. Number of IB Examinations Taken and Percent of IB
Exams Passed by Subject Area,
2013-2014 and 2014-2015
South Dade Senior**

Subject Area	# of Exams Taken		% of Exams Passed	
	2013- 2014	2014- 2015	2013- 2014	2014- 2015
Biology	58	38	41%	21%
Chemistry	9	0	N/A	N/A
English A Literature	67	42	90%	76%
French B	9	2	N/A	N/A
History	65	43	57%	28%
Mathematical Studies	55	42	44%	17%
Mathematics	6	0	N/A	N/A
Psychology	57	35	49%	31%
Spanish AB	6	4	N/A	N/A
Spanish B	51	37	98%	86%
Visual Arts	10	7	100%	N/A
Total, All Subjects	393	250	63%	42%